



QUALITY CERTIFICATE

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"Penn 90"	Port	Boston, MA	Report	052203
Sprague Energy	Date	May 14, 2003	Reference	•
Analysis	Terminal	Sprague Quincy	Sample #	40357
	Sprague Energy	Sprague Energy Date	Sprague Energy Date May 14, 2003	Sprague Energy Date May 14, 2003 Reference

Name of material being tested Description of sample source Samples Drawn by (company) Samples Tested by (company)

#6 Fuel Oil

Shore Tank # 11 After Discharge Inspectorate America Corp. Inspectorate America Corp.

Tests being Performed	Test method	Sample Results
Gravity API @ 60 F	D - 287	12.1
Flash Point, PMCC, F	D - 93	>230
/iscosity cSt @ 122 F	D - 445	222.3
/iscosity SFS @ 122 F	D - 1261	105.20
Pour Point, F	D - 97	43
Sulfur, wt %	D - 4294	0.458
Vater & Sediment, vol %	D - 1796	0.2
Bross Heat of Combustion, BTU / Ib	D - 240	18,509
Gross Heat of Combustion, BTU / gal	D - 240	151,890
Nitrogen, wt %	D - 3228	0.35
Ash wt %	D - 482	0.11
Ashphaltenes, wt %	IP - 143	0.89
Conradson Carbon Residue, wt %	D - 189	8.9
/anadium, ppm	D - 5863	15
Sodium, ppm	D - 5863	20
Jodium, ppm		
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THE ATTACHED CECTURE ATTACHED		
THE ATTACHED CERTIFICATE REPRESENTS THE PRODUCT INSPEC BY THE INSPECTION SERVICE ON THE DATE STATED ON THE	OTED	
CENTRE VALUE IN THE TANK STATED BY THE INCRECTION CERVICE	SPRAGUE	
THE PROCESS OF ANY PROPERTY OF MAY CELL AT THE DAMPERAN	N. P.	1
THOM SOUTHNOMED HON CARLIER ATERIET CHOU DEADLIAN CHA) ;	
MEET THE SPECIFICATIONS AS MAY BE REQUIRED BY ANY APPLIC REGULATIONS WITHIN THE STATE THAT THE PRODUCT IS SOLD.	ARLE	
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^{**} Annotates Analysis Contracted Out

Michael White